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Engineering Note

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Project: Solenoid Energization, Controls, Interlocks & Quench Protection
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Subject: DMACS Tagname Standards

This note describes the standard used for assigning DMACS tagnames to data base blocks in the PLC control system

There two kinds of data base blocks, primary and secondary. Primary blocks are usually associated with I/O hardware and getting data into and out of the driver image table. Secondary blocks manipulate data to implement higher level control functions.

The schematic diagrams for the solenoid system uses descriptive signal names of up to 15 characters long to define signals connected to the PLC control system. Since DMACS tagnames can only be 10 characters long, it is not practical to use the schematic signal names as DMACS tagnames. Thus the tagnames for I/O points (primary blocks) shall be selected based on the PLC hardware channels rather than on the schematic signal names. The relationship between tagnames and schematic signal names is mapped in the controls wiring data base "SOLCTRLS.MDB" maintained by Rick Hance.

Primary block tagnames for I/O are constructed as follows:

Basic Tagname	Value for X	Description
DC_AIX	X = 1-48	Analog inputs
DC_AOX	X = 1-8	Analog outputs
DC_RTDX	X = 1-16	RTD inputs
DC_DIX	X = 1-48	Digital inputs
DC_ROX	X = 1-16	Relay outputs

Description:

The "DC" indicates that the tagname is for the DC controls. AI, AO, RTD, DI and RO indicate the type of PLC channel. X is the sequential channel number for the type of signal.

Example:

DC_AI13 = Analog input #13 to the DC controls PLC.

Secondary blocks do not define I/O points. For example, a block of type "calculation". For these situations, a descriptive name shall be chosen of the order "DC_XXXXXXX". DC_ identifies the tag as belonging to DC controls, and XXXXXXXX is any combination of legal characters chosen to describe the function.

Example:

DC_TIMER1 = Timer #1 in the DC controls blocks.